RAILROADS IN THE MISSILE AGE

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ASSOCIATION OF
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RAILROADS — MAINLINE FOR MISSILES

A new role for railroads in the nation's defense begins this summer with trial runs leading to mobile missile-firing trains. These Air Force-railroad tests would in time of war turn the industry's 220,000 miles of mainline — the traditional main arteries of America's economic and productive strength — into a tactical first line of defense in the Missile Age.

Railroad management and the rail Brotherhoods have joined in pledging their full support to this vital defense project. Both have assured the Air Force that no work stoppages will affect the maintenance, scheduling, dispatching and operation of these missile trains. And the Association of American Railroads, on behalf of participating carriers, has assured that these lines will provide the necessary crews, liaison officials, motive power and other equipment to expedite the test runs during the next several months.

These maneuvers will point the way toward establishing elusive mobile launching pads capable of firing missiles of intercontinental range from almost any point in the country. Selection of the railroads to transport the Minuteman underscores the fact that this basic transportation industry is custom-made for the job. For the entire nationwide system is a self-sustaining unit capable of controlling unified movements of trains throughout the country at a moment's notice.

RAILROADS OFFER GIANT DEFENSE ASSET

Railroads comprise an immense plant of tracks, stations, shops, signals and communications and rolling stock. In brief, railroads . . .

- SERVE 50,000 communities over 220,000 miles of steel roadway (370,000 miles of track).
- EMPLOY 800,000 people.
- OPERATE a fleet of over 28,000 diesel locomotive units hauling more than 2,000,000 freight and passenger cars.
- CARRY nearly *half* of the nation's intercity freight load and nearly *one third* of its commercial passenger traffic.

IMPACT OF WAR EMPHASIZES KEY ROLE OF RAILROADS

All forms of transport do *not* share equally in the increase of traffic brought on by a national emergency. Shortages of manpower and of certain transportation facilities to support military operations, together with curtailments of scarce fuels and operating supplies, tend to emphasize the crucial role of railroads in time of war. For railroads have unmatched advantages in heavy capacity, high mobility and coordination of operation, regional flexibility, tough durability and unmatched economy in using scarce resources.

World War II underlined these facts. The nation's railroads then handled 90 per cent of all domestic military freight and 97 per cent of organized military passenger travel. Stretching capacity limits, railroads increased their work load to DOUBLE their prewar volume of freight traffic, military and civilian combined, and FOUR TIMES their prewar volume of passenger traffic.

Even during the Korean War, when competing modes of transport were not hampered by rationing of fuel and scarce materials as in War II, the railroads were called upon to transport 72 per cent of all military freight and 64 per cent of military passenger volume. Intensification or spread of that conflict would have sharply boosted these ratios.

RAILROADS POSSESS UNIQUE ADVANTAGES

From the military standpoint, rail transportation has unique advantages over other carriers, enabling railroads to maintain their priority defense role regardless of rapid changes in military strategy. Summarized, these are:

Flexibility and Expansibility. Railroads have great capacity and can haul greatly expanded volumes of traffic in relation to increases in facilities required. The unprecedented boosts in transport requirements of War II were met by the railroads with increases of less than 5 per cent in the number of locomotives, less than 7 per cent in the number of freight cars and less than 5 per cent in the number of passenger-carrying cars. Other carriers generally need far greater input of essential resources to get an increase in output.

In an emergency, it is estimated that railroads could expand their traffic load by 30 to 50 per cent over present levels.

Economy of Resources. One of the fundamental reasons for dependence on the railroads in time of war lies in their economical use of fuel and manpower. For example, railroads produce transportation services at a far less expenditure of manpower and fuel per unit of traffic than do intercity trucks. According to statistics of the Interstate Commerce Commission, railroads produce *three times as much freight service per employee* as intercity motor carriers. And in the case of fuel utilization, railroads perform *nearly five times as much service per dollar of fuel expense,* as motor carriers. This superior economy of railroad services would be a crucial factor in times when all resources must be devoted to the winning of war.

Durability and Recuperability. Federal Civil and Defense mobilization officials consider railroads one of the least vulnerable forms of transportation to damage from enemy attack. In the United States, which has one-third of the world's total railway mileage affording many alternate routes, destruction of the 220,000-mile railroad system would be impossible to conceive. Moreover, the railroads' "shock troops" — the ever-ready track repair crews — are skilled in instantly meeting and coping with disaster.

Mobilization of Operations. Though composed of 111 major Class I lines and 500 smaller ones, railroads comprise a highly organized, tightly integrated nation-wide operating system. Defense transport officials depend on the facility with which rail movements of huge military units are made through standard procedures and facilities readily available. These include highly skilled personnel, a centrally controlled system of standardized equipment, national interchange arrangements and a unique private signalling and communications network. *Such assets could prove one of America's greatest counter-weapons in an attack.*

HOW RAILROADS ARE MEETING THE CHALLENGE

Though faced with steady passenger traffic losses and increasingly serious freight competition from carriers using tax-built and tax-maintained highway, air and water facilities, the self-supporting railroads have managed to spend more than $15 billion of private capital to modernize and strengthen operations since World War II. Of this amount over $650 million was spent for modern traffic control and communications systems, $885 million for new passenger cars, about $4 billion for new motive power and some $5 billion for new freight cars. The balance went into new roadway machines, improvements to stations and track and other modernization projects. Some of this program's highlights:

- **Dieselization** has all but replaced steam power. Accounting for over 97 per cent of all locomotive service, the modern fleet of 28,163 diesel units is more efficient and gives more service with less time out for repairs than the 42,841 locomotives (mostly steam) of 1946.

- **In freight hauling,** Class I lines have replaced half of their car fleet with stronger and larger units. Today's fleet of 1,676,376 units includes an array of new-type cars such as wide-door boxcars with "damage free" loading and tie-down equipment, "air-slide" hopper cars for air-pressure loading and unloading of bulk commodities and special flatcars equipped to handle containers or truck-trailers in "piggy-back" operations.

- **A fleet of 705 heavy-duty flatcars** for moving outsized and heavy shipments for the military — including the Polaris, Jupiter and Titan missiles — are included in the rail car fleet. These heavyweight cars augment the government's own fleet of 929 cars capable of handling big shipments over rails.

- **Streamlined yards and terminals,** including ultra-modern "push-button" yards located in strategic parts of the country, are capable of assembling and classifying trains in greater volume and at faster rates than ever before.

- **The railroads' passenger-carrying fleet** of 30,667 cars (including Pullmans) has been upgraded since War II with over 6,600 modern passenger-train cars, including self-propelled units. A major problem, however, lies in the 40 per cent decrease in the size of this vital fleet since War II.

These improvements have resulted in a large increase in railroad efficiency. They point up the determination of rail management to do everything humanly possible to get the job done regardless of its magnitude and despite the mounting squeeze from public policy inequities in the fields of taxation, regulation and government road, river and air development programs. Railroads will continue to give priority to improvement of plant and operating methods to the extent permitted by earnings. And management will continue its efforts on behalf of realistic changes, both internally and toward equality of government treatment externally, to bring new vigor and growth to railroading — *America's lifeline in the Missile Age.*

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EDITORS: *If a map of U.S. rail lines could prove useful for illustration purposes, a copy of our new multi-color 38-by-52 inch map can be obtained by writing the AAR News Service at Washington 6, D. C.*